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DEPARTMENT OF LAND AND NATURAL RESOURCES
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KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

Testimony of
DAWN N. S. CHANG
Chairperson

Before the House Committee on
JUDICIARY & HAWAIIAN AFFAIRS

Friday, February 21, 2025
2:00 PM

State Capitol, VIA VIDEOCONFERENCE, Conference Room 325

In consideration of
HOUSE BILL 345, HOUSE DRAFT 1
RELATING TO THE STATE SHRIMP

House Bill 345, House Draft 1 proposes to establish the 'ōpae 'ula (*Halocaridina rubra*) as the state shrimp to promote the protection of anchialine pool ecosystems throughout Hawai'i. **The Department of Land and Natural Resources ("Department") supports this measure.**

Anchialine pool ecosystems, also known as wai 'ōpae, are land-locked coastal bodies of water that are connected underground to both marine and freshwater sources through porous basalt lava rock and limestone. While anchialine ecosystems exist elsewhere around the world, Hawai'i is home to approximately 700 of these habitats, and arguably has the highest concentration of anchialine pools in the world.

Anchialine ecosystems provide habitat for numerous native species, including at least eight anchialine shrimp species (3 endemic, 5 indigenous) and a rare species of anchialine crab only known to occur at a single site on Maui. Anchialine pools were a vital source of water and provided sustenance to Native Hawaiians. These pools are also frequently mentioned in mo'olelo (stories) and are important to the revival of traditional practices, such as the harvest of 'ōpae 'ula for use in 'ōpelu fishing in parts of West Hawai'i.

'Ōpae 'ula is the signature species of Hawaiian anchialine pools. While being culturally significant, it also plays a critical role in maintaining a healthy anchialine pool ecosystem by its intensive grazing of algae. 'Ōpae 'ula are endemic to Hawai'i and are known to have genetically distinct populations across the islands and across moku (island districts). Although only growing

to roughly half an inch in size, these tiny shrimps have surprisingly long life-spans of over 20 years. Further, 'ōpae 'ula display amazing resilience to natural events such as recent lava flows and can thrive in these dynamic conditions. A pool that is red with 'ōpae 'ula is indicative of a healthy and flourishing anchialine ecosystem. Unfortunately, these ecosystems are highly threatened by the spread of invasive plants, fishes and invertebrates, coastal development, human-sourced pollution, sea level rise, and changes to upland sections in the watershed.

Establishing 'ōpae 'ula as the Hawai'i state shrimp is an important step in recognizing these habitats as particularly valuable, and identifying natural and cultural resources within anchialine pools that warrant conservation attention.

Mahalo for the opportunity to provide testimony in support of this measure.



Testimony Before The
House Committee on Judiciary & Hawaiian Affairs (JHA)
IN SUPPORT OF HB345 HD1
February 21, 2025, 2:00 p.m., Room 325 & Via Videoconference

We are Olan Leimomi Fisher and Kevin Chang, Kua'āina Advocate and Executive Director, respectively, testifying on behalf of [Kua'āina Ulu 'Auamo \(or KUA\)](#). "Kua'āina Ulu 'Auamo" stands for "grassroots growing through shared responsibility," and our acronym "KUA" means "backbone." **Our mission is to connect and empower communities to improve their quality of life through the collective care for their biocultural (natural and cultural) heritage, serving as a "backbone organization" that supports creative, community-driven solutions to problems stemming from environmental degradation.** Hawai'i's biocultural resources continue to be negatively impacted by political, economic, and social changes, and the increasing dangers of climate change make fostering and empowering resilient communities acutely critical.

Currently KUA supports three major networks of: (1) over 40 mālama 'āina (caring for our 'āina or "that which feeds") community groups collectively referred to as E Alu Pū (moving forward together); (2) over 60 loko i'a (fishpond aquaculture systems unique to Hawai'i) and wai 'ōpae (anchialine pool systems) sites in varying stages of restoration and development, with numerous caretakers, stakeholders, and volunteers known as the Hui Mālama Loko I'a ("caretakers of fishponds"); and (3) the Limu Hui made up of over 50 loea (traditional experts) and practitioners in all things "limu" or locally-grown "seaweed." **Our shared vision is to once again experience what our kūpuna (ancestors) referred to as 'ĀINA MOMONA – abundant and healthy ecological systems that sustain our community resilience and well-being.**

KUA strongly supports HB345 HD1 as an incremental step towards 'āina momona.

This bill would establish the 'ōpae'ula as the state shrimp to make way for more awareness, education, protections, and resources for not only the 'ōpae'ula themselves, but also their main habitat in wai kai or wai 'ōpae (anchialine pools). Wai 'ōpae are wahi pana, sacred places, and there are over 600 recorded pools across Hawai'i. Several of our KUA community members help to protect these special places and the 'ōpae'ula that they house. The 'ōpae'ula is endemic to Hawai'i and hold several important uses including for 'ōpelu fishing and as food for loko i'a. They are also important grazers keeping bacteria and algae in balance with the overall ecosystem. Habitat loss through pollution and coastal development, as well as invasions of invasive species, continue to threaten the 'ōpae'ula and their wai 'ōpae.

We know that the state Department of Land and Natural Resources, Division of Aquatic Resources (DAR) has been working on a Protection and Restoration Strategy for wetland ecosystems as a part of the Hawai'i Wetland Program Plan. One of the wetland types covered under this strategy is anchialine pools. With this plan nearing completion and implementation, we find that HB345 HD1 comes at an ideal time to also increase the necessary hand-in-hand community awareness and education for wai 'ōpae and 'ōpae'ula in Hawai'i.

A primary function of KUA includes support for the development of an ‘auwai, or a system of resources, tools, bridges, relationships, and networks that cultivate and elevate our communities’ efforts to greater levels of collective impact in the care of our biocultural resources. In 2023, KUA was so grateful that your legislature designated Limu Kala as the state’s limu through passage of [Act 230](#) (HB819 HD2 SD1). Act 230 has since paved the way for more education and awareness of limu kala and other Native Hawaiian limu, and more communities are expressing interest in learning about and advocating for limu. We hope to do the same here with formal designation of ‘ōpae‘ula as our state shrimp and we would really appreciate your Committee’s support of this effort.

The communities we work with are committed to ensuring the long-term health of our biocultural resources. They have depended on them for generations. **We believe our environment, the foundation of our very existence, is about long-term investment and a vision of ‘āina momona.** To get there it requires, among other things, taking the steps toward greater self-sufficiency including development of innovative and sustainable career pathways, mindsets, relationships, and resource flows for mālama ‘āina. Passing this bill out of your committee will open an essential ‘auwai system toward reaching this vision.

Mahalo nui loa for considering our testimony. Please **PASS** HB345 HD1.

Aloha ‘Āina Momona no nā kau ā kau.



Hawai'i Wildlife Fund

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Celebrating 28+ years of protecting Hawaii's native wildlife through
research, education and conservation.

19 February 2025

Re: Strong Support for House Bill 345 for JHA Hearing (2/21/25 @ 2 PM)

Aloha Chair Tarnas, Vice Chair Poepoe, and other Representatives on the Committee on Judiciary & Hawaiian Affairs,

Hawai'i Wildlife Fund (HWF) is pleased to provide **strong support for the proposed state shrimp bill (HB345)**, which officially designates our endemic ōpae'ula (or "red shrimp", *Halocardina rubra*) as Hawaii's state shrimp 🍤! This important bill will provide more opportunities for awareness, education, protection, and resources for Hawaii's wai'ōpae and ōpae'ula.

With others from the Hui Loko network (a collective of fishpond and anchialine pool researchers, caretakers, and managers on Hawai'i Island), HWF worked with Rep. Lowen in 2019 to first introduce this measure that was never issued a hearing. We hope that this legislative session the measure will be passed with strong support across the chambers. We are still strong proponents of this effort and have been working to restore anchialine ecosystems across Hawai'i for nearly two decades. We feel that this effort, alongside the ongoing state DLNR efforts to better protect, restore, and manage anchialine ecosystems, will bring the right kind of attention and awareness to this "charismatic minifauna" and the fragile native habitat they reside in.



Anchialine pools are rare worldwide, but common in Hawai'i, especially across Moku o Keawe. Please help us protect these unique environments and VOTE 'Ae for the 'ŌPAE ULA bill.

Founded in 1996, Hawai'i Wildlife Fund is a nonprofit organization with a mission to conserve Hawai'i's native wildlife through research and education. We engage and inspire communities through outreach, education, conservation and habitat restoration activities, conducting environmental research, supporting community-driven management efforts, and initiating advocacy campaigns. We have been working to protect native wildlife and restore coastal / nearshore ecosystems across the Hawaiian Archipelago for the past 28 years with community and partner support.

In conclusion, **HWF strongly supports the 'ōpae'ula and asks for your vote.** Thank you for considering this testimony. Should you have any questions, please contact me at megan@wildhawaii.org. Including some 'ōpae'ula and anchialine pool (and restoration) photos for your viewing pleasure.

Sincerely,



Megan Lamson Leatherman, M. Sc.

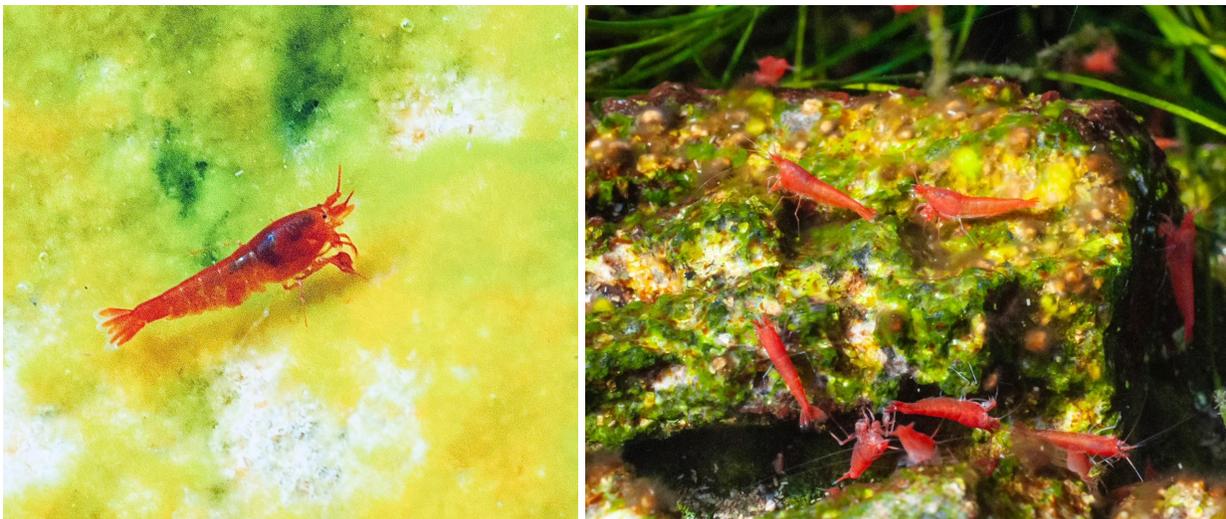
Hawai'i Wildlife Fund, President and Hawai'i Program Director

megan@wildhawaii.org | (c) 808-217-5777 | (w) 808-769-7629 (HWF Marine Debris Hotline)

K Lindsey Kramer, M. Sc.

Hawai'i Wildlife Fund, Coral Reef & Resources Specialist

Lindsey@wildhawaii.org



Above 'ōpae photos by L. Kramer / HWF. Below anchialine pool landscape photos by miscellaneous HWF staff / volunteers.



Hawai'i Ocean Legislative Task Force



February 21, 2025

House Committee on Judiciary & Hawaiian Affairs
Hawai'i State Legislature

Re: Testimony in SUPPORT of HB345 HD1, Relating to the State Shrimp

Aloha Chair Tarnas, Vice Chair Poepoe, and members of the committee,

The Ocean Legislative Task Force, a coalition of over 100 individuals from diverse organizations and communities across Hawai'i, strongly supports HB345 HD1, relating to the state shrimp, which establishes the 'ōpae 'ula as the state shrimp to protect anchialine pool ecosystems throughout Hawai'i.

This recognition is more than symbolic—it highlights the vital role of anchialine pools in our island's ecology and the urgent need to protect these fragile freshwater and coastal resources. Anchialine pools, or wai 'ōpae, are culturally sacred and ecologically unique ecosystems found throughout Hawai'i, with the majority located in North and South Kona and Ka'ū. These pools are home to the endemic 'ōpae 'ula, a species of shrimp that serves as a key indicator of ecosystem health. When these shrimp populations thrive, it signifies that the water quality and ecological balance of the anchialine pool remain intact. Unfortunately, habitat destruction, pollution, and invasive species threaten these pools, jeopardizing not only the 'ōpae 'ula but also the broader interconnected health of our freshwater and ocean systems.

Designating the 'ōpae 'ula as the state shrimp will raise public awareness and encourage greater stewardship of anchialine pool ecosystems across the islands. This bill aligns with the Ocean Legislative Task Force's commitment to safeguarding Hawai'i's natural resources for future generations while also respecting and supporting traditional practices, such as the cultural use of 'ōpae for 'ōpelu fishing.

Protecting our fresh and coastal waters is essential—not just for the survival of endemic species like the 'ōpae 'ula, but for the overall health and sustainability of our island communities. Clean, thriving ecosystems are fundamental to food security, climate resilience, and the well-being of both people and nature.

Mahalo for the opportunity to support this measure.

The Ocean Legislative Task Force advocates for measures that promote funding for natural resource protection and restoration, ocean resources, coral reefs, subsistence fishing, and coastal resilience, and other priorities.

HB-345-HD-1

Submitted on: 2/19/2025 4:43:52 PM

Testimony for JHA on 2/21/2025 2:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Douglas Perrine	Individual	Support	Written Testimony Only

Comments:

I believe that naming opae 'ula as our state shrimp will bring attention both to the importance of conserving these endangered creatures, but also toward protecting the anchialine pond ecosystems in which they live. Please support HB345.

HB-345-HD-1

Submitted on: 2/19/2025 4:44:44 PM

Testimony for JHA on 2/21/2025 2:00:00 PM

Submitted By	Organization	Testifier Position	Testify
robin knox	Individual	Support	Written Testimony Only

Comments:

The anchialine pools and the 'ōpae 'ūla exist no where else. Protect these precious resources by designating 'ōpae 'ūla as the state shrimp to protect anchialine pools

HB-345-HD-1

Submitted on: 2/19/2025 6:16:27 PM

Testimony for JHA on 2/21/2025 2:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Jenny Yagodich	Individual	Support	Written Testimony Only

Comments:

SUPPORT for HB345 HD1 to establish the ‘ōpae ‘ula as the state shrimp to protect anchialine pool ecosystems throughout Hawai‘i.

HB-345-HD-1

Submitted on: 2/20/2025 2:42:13 PM

Testimony for JHA on 2/21/2025 2:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Mary Ann Pahukoa	Individual	Support	Remotely Via Zoom

Comments:

Hawaiian ‘ōpae play a vital role in freshwater and estuarine ecosystems by contributing to nutrient cycling, controlling algae growth, and serving as an important food source for native species like ‘o‘opu and birds. Their presence indicates healthy water quality, as they are highly sensitive to pollution and changes in stream conditions. However, historical stream diversions and habitat degradation have severely impacted ‘ōpae populations, disrupting their natural life cycles and reducing biodiversity.

Restoring stream flow is essential for revitalizing ‘ōpae populations and maintaining ecological balance. Natural water movement ensures migration pathways, supports oxygen levels, and flushes out sediment and pollutants. A steady flow also helps native species recover while reducing invasive threats. Additionally, restored streams support traditional Hawaiian practices, such as loko i‘a, and preserve cultural 'ike tied to wai and 'aina stewardship. Protecting and restoring streams benefits not only ‘ōpae but the broader ecosystem and community reliant on these freshwater resources.

HB-345-HD-1

Submitted on: 2/21/2025 9:45:28 AM

Testimony for JHA on 2/21/2025 2:00:00 PM

Submitted By	Organization	Testifier Position	Testify
Dorothy Norris	Individual	Support	Written Testimony Only

Comments:

Important for the protection of the shrimp's habitat which is disappearing rapicly.